ENGLISH™ PUTS REALITY® AT YOUR FINGERTIPS.

What is REALITY?

Microdata's REALITY® is a family of extremely powerful computer systems which puts control of your entire operation at your fingertips. REALITY uses ENGLISH™—the easy-to-use, powerful computer language developed by Microdata.

REALITY allows up to 32 independent users within your organization to start using the system right away. Without long delays and without special training.

You communicate with the system in ENGLISH through local or remote on-line terminals, right now. A single entry anywhere in the system automatically updates all pertinent files throughout the entire system, so results are always up to date the moment you receive them.

Through ENGLISH, REALITY can even be tailored to understand the special jargon of your particular industry and your individual company.

The system owes its extraordinary power and adaptability to a great number of powerful elements. Here's a brief summary of REALITY features:

Unique Microprogrammed Firmware Contains:

- Virtual Memory Manager
- Multi-user Operating System
- Special Data Management Instructions
- Input/Output Processors

Unique System Software Includes:

- Languages: ENGLISH, DATA/BASIC,™ PROC, TCL, RPG II
- Selectable/automatic report formatting
- Dynamic file/memory management
- Selectable levels of file/data security

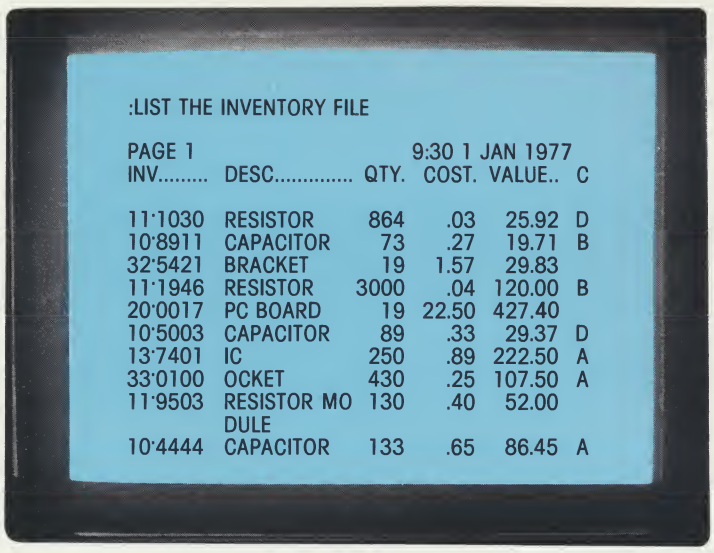
Unique File Structure Provides:

- Variable length files/records/fields
- Multi-values (and sub-values) in a field
- Efficient storage utilization
- Fast accessibility to data item
- File size limited only by size of disc
- Record size up to 32K bytes

The system provides:

- True data base management
- Variable length fields, records, files
- File security
- Microprogrammed Virtual Memory Operating System
- Up to 32 users and 600 million characters of file storage.
- On-line file update/retrieval
- Fast terminal response
- Small computer price
- Big computer performance
- Asynchronus and bi-synchronus communications

Communication with REALITY takes place through CRT terminals. Here are a few examples of typical CRT screens.

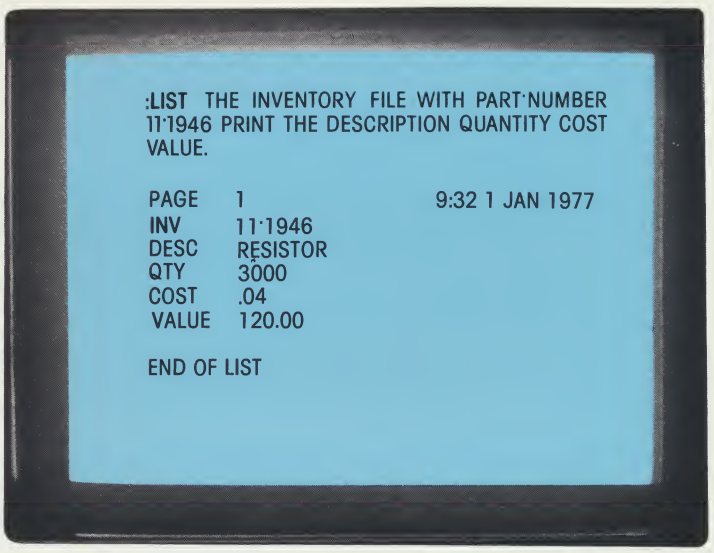


```
:LIST THE INVENTORY FILE

PAGE 1                          9:30 1 JAN 1977
INV..... DESC..... QTY. COST. VALUE.. C

11·1030  RESISTOR   864   .03   25.92  D
10·8911  CAPACITOR   73   .27   19.71  B
32·5421  BRACKET     19  1.57   29.83
11·1946  RESISTOR  3000   .04  120.00  B
20·0017  PC BOARD    19 22.50  427.40
10·5003  CAPACITOR   89   .33   29.37  D
13·7401  IC         250   .89  222.50  A
33·0100  OCKET      430   .25  107.50  A
11·9503  RESISTOR MO 130  .40   52.00
         DULE
10·4444  CAPACITOR  133   .65   86.45  A
```

When the system prompts the display with a colon (:), the user may enter an ENGLISH statement. LIST THE INVENTORY FILE will cause the system to list all items in the file called "INVENTORY." Column headings are determined by a list in the file dictionary.



```
:LIST THE INVENTORY FILE WITH PART·NUMBER
11·1946 PRINT THE DESCRIPTION QUANTITY COST
VALUE.

PAGE    1                       9:32 1 JAN 1977
INV     11·1946
DESC    RESISTOR
QTY     3000
COST    .04
VALUE   120.00

END OF LIST
```

The LIST statement at the top of the screen explicitly names the attributes to be displayed (DESCRIPTION...VALUE) from the INVENTORY file. A particular item selection (11·1946) has also been specified. If the attributes cannot fit across the page, ENGLISH will automatically revert to non-columnar display, as seen here.

An ENGLISH Primer.

An ENGLISH statement contains several grammatical structures which can be represented as follows:

Verb	File (Noun)	Attributes (Nouns)	Selection Criteria (Adjectives)	Miscellaneous Connectives (Adverbs)
LIST SORT COUNT etc.	name DICT name	implicit explicit	all 'item-id' WITH	LPTR DBL-SPC SUPP SORT-BY etc.
←——Required——→		←——Optional——→		

The **verb** must be the first word. Other words in the statement can generally be in any order. The **file** specification lets you access either the data or the dictionary of a file.

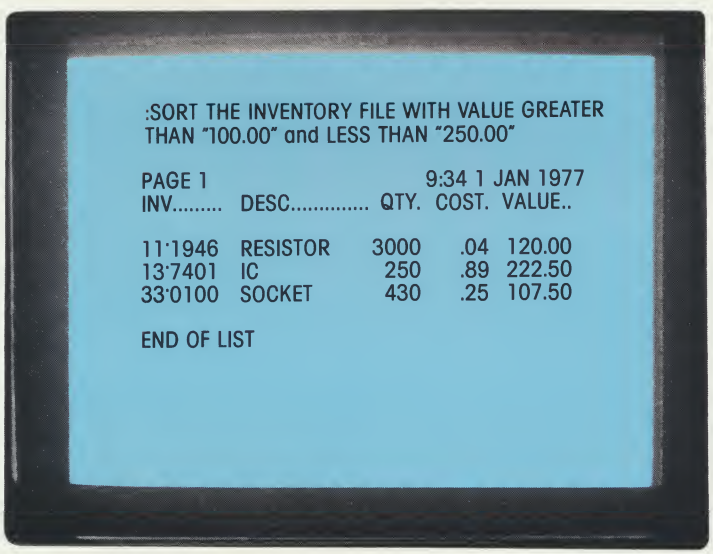
The attribute list may be stated explicitly using attribute names found in the file dictionary. If none is specified in the statement, the implicit attribute synonym list in the file dictionary will be used to specify the fields to be displayed.

The **selection criteria** determine which items in the file will be operated upon. If nothing is specified, all items will be used. One or more direct references may be made by specifying the item-id (identification code for an individual data item) in single quotes. A conditional retrieval may be specified using a WITH clause.

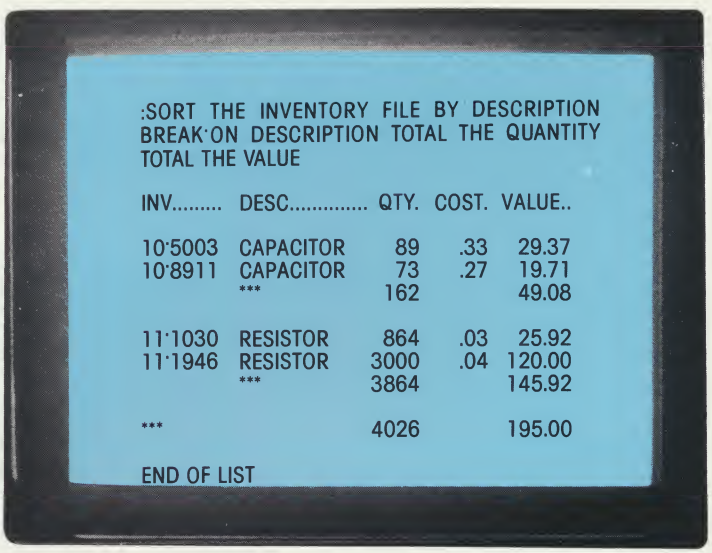
The WITH clause may be a simple or complex combination of attribute names, relational operators (=, >, LT, AFTER, etc.), logical operators (AND, OR) and data values ("100," "12/21/76," "RESISTOR," etc.).

Miscellaneous connectives may be used to modify the effect of the verb or alter the display format.

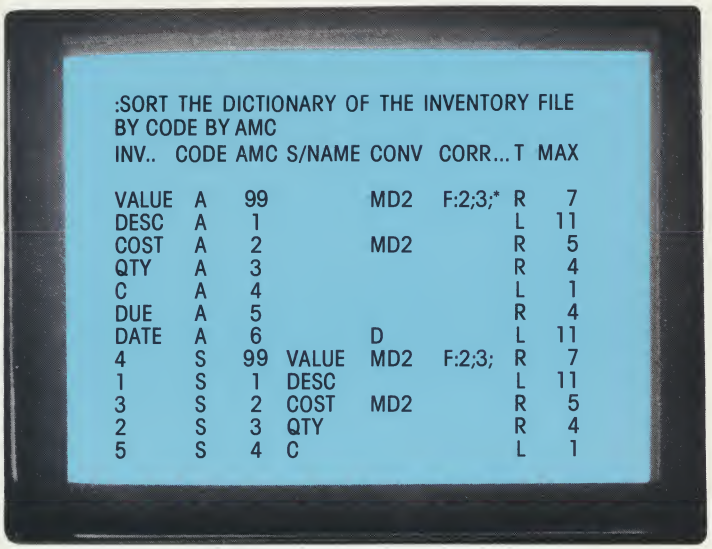
Following are a few more examples showing some of the capabilities of ENGLISH. The statement at the top of each CRT display represents the inquiry. The caption explains the meaning of various elements in the inquiry statement.



This SORT statement uses conditional selection criteria (WITH VALUE GREATER THAN "100" and LESS THAN "250"). Items in the INVENTORY file that have a value greater than $100.00 and less than $250.00 will be displayed in sorted order. When no sort keys are specified, the item-id (identification code for individual data items) will be used as the sort key.



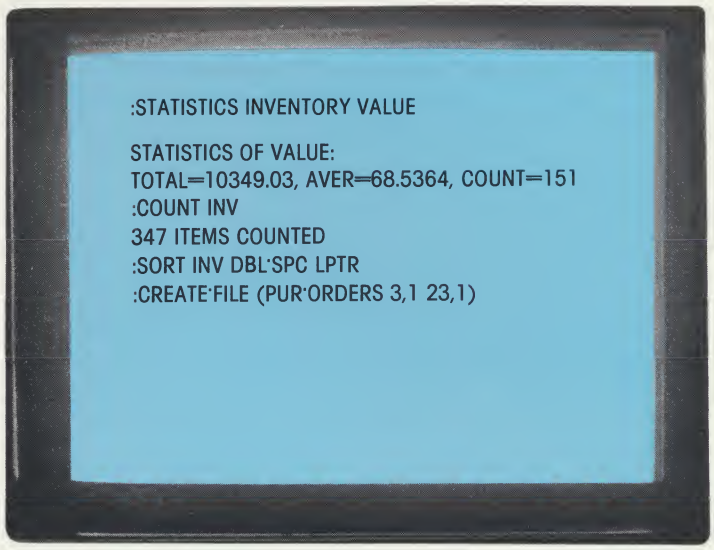
This SORT statement uses the BREAK·ON/TOTAL feature to summarize (TOTAL) specified attributes. The totals will be displayed every time the value of the BREAK·ON attribute (in this case, DESCRIPTION) changes. A sort key (BY DESCRIPTION) has also been specified.



```
:SORT THE DICTIONARY OF THE INVENTORY FILE
BY CODE BY AMC
INV..  CODE AMC S/NAME CONV  CORR... T MAX

VALUE  A    99         MD2   F:2;3;* R   7
DESC   A    1                      L  11
COST   A    2          MD2         R   5
QTY    A    3                      R   4
C      A    4                      L   1
DUE    A    5                      R   4
DATE   A    6          D           L  11
4      S    99 VALUE   MD2   F:2;3; R   7
1      S    1  DESC                 L  11
3      S    2  COST    MD2         R   5
2      S    3  QTY                  R   4
5      S    4  C                    L   1
```

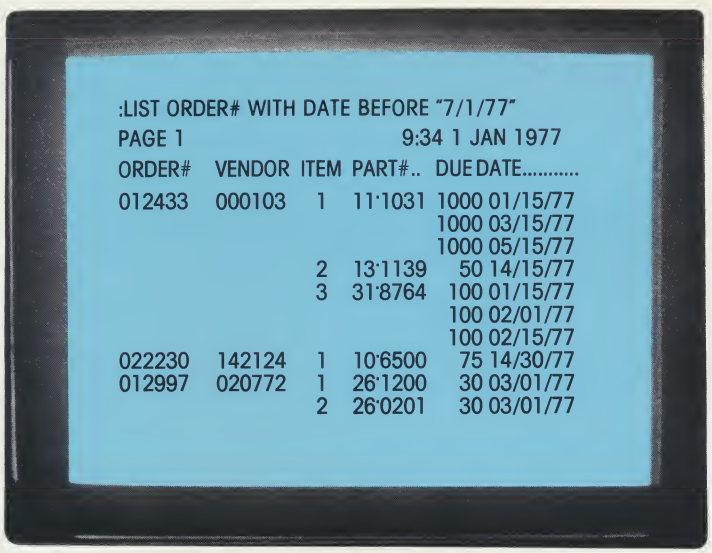
This SORT statement displays a sorted listing of the dictionary for the INVENTORY file. Two sort keys are specified (BY CODE and BY AMC). The dictionary contains attributes (CODE = A) and attribute synonyms (CODE = S). The AMC specifies the field position of that attribute in the data record. The synonyms "1,2,3,4,5" form the implicit attribute synonym list. CONV is the conversion specification (D for date, MD2 for masked decimal with 2 fractional digits). CORR is the correlatives specification (F:2;3;* is the function of multiplying field 2 times field 3). The type (T) specifies display of data either left (L) or right (R) justified in MAX columns.



```
:STATISTICS INVENTORY VALUE

STATISTICS OF VALUE:
TOTAL=10349.03, AVER=68.5364, COUNT=151
:COUNT INV
347 ITEMS COUNTED
:SORT INV DBL·SPC LPTR
:CREATE·FILE (PUR·ORDERS 3,1 23,1)
```

STATISTICS is used to sum a specified attribute (VALUE). The display shows the accumulated total, the count of the number of items that met the selection criteria and the average value. COUNT is used to determine the number of items in a file which meet the selection criteria. On the SORT INV statement, DBL·SPC will cause double spacing, and LPTR will direct the sorted listing to the line printer. CREATE·FILE causes a dictionary and data file to be allocated under the name PUR·ORDERS. The parameters (3,1 23,1) are used to optimize the organization of the file structure.



```
:LIST ORDER# WITH DATE BEFORE "7/1/77"
PAGE 1                        9:34 1 JAN 1977
ORDER#   VENDOR  ITEM PART#..  DUE DATE.....
012433   000103   1   11·1031  1000 01/15/77
                              1000 03/15/77
                              1000 05/15/77
                  2   13·1139    50 14/15/77
                  3   31·8764   100 01/15/77
                              100 02/01/77
                              100 02/15/77
022230   142124   1   10·6500    75 14/30/77
012997   020772   1   26·1200    30 03/01/77
                  2   26·0201    30 03/01/77
```

Attributes ITEM and PART # may contain multiple values which are displayed in a columnar format. Also, the attributes DUE and DATE show a further level of indenturing due to multiple sub-values for a given value. ENGLISH will automatically display values and sub-values in an indentured format while maintaining their corresponding relationships.

```
:CHANGE INV 11·3066 DESC TO "IC"
 11·3066 UPDATED
:NEW·PO
...ENTER NEW PURCHASE ORDER...
PO#              : 020316
VENDOR#          : 112770
ITEM#  PART#     DUE.  DATE.....
1      11·1032    50   01/15/77
                 100   02/15/77
2      20·5555    30   02/01/77
END
'020316' ADDED
```

The PROC high-level procedural programming language can be used to write ENGLISH-like verbs or to create an interactive data entry routine. The CHANGE proc accepts all required information in a single statement. The NEW·PO proc prompts the user for required information and sets up column headings which can then be filled in by the user.

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What is ENGLISH?

ENGLISH is not a programmer's language. It is a data management language for people who need fast access to information. It is easy to understand and to use.

You tell the computer what to do through statements or inquiries that have certain specific elements. A typical inquiry consists of a free-form sentence containing verbs, nouns, adverbs and adjectives that help the computer identify specific items you want it to select out of a data file.

Verbs tell the computer what to do and include commands like LIST, SORT, COUNT and SELECT.

Nouns are the names of files, data attributes and record/fields and include INVENTORY, PURCHASE ORDERS, ACCOUNTS PAYABLE, etc.

Connectives are used to combine grammatical phrases, alter the report format and modify the action of the verb.

Data selection criteria can specify a specific item or record, an entire file or a set of conditions that will identify the kind of items you want the computer to include.

ENGLISH is a dictionary-driven language to the extent that the vocabulary used in composing an ENGLISH sentence is contained in several dictionaries. Verbs, file names and connectives are located in each user's master dictionary. Every user file consists of a data file and a dictionary file which contains a structural definition of the data. ENGLISH references the dictionary for data attribute descriptions. These descriptions specify data fields, functional calculations, inter-file retrieval operations and display format and positioning.

How does ENGLISH work?

Files are organized in a hierarchical structure. A file at one level points to several files at a lower level.

There are four distinct file levels: SYSTEM DICTIONARY, USER MASTER DICTIONARY, USER-FILE DICTIONARY and USER-FILE DATA.

The SYSTEM DICTIONARY file contains all legal user log-on names, passwords and security codes.

Each USER MASTER DICTIONARY file contains all user vocabulary (verbs, nouns, connectives and throwaways), all accessible file names, application PROC's (procedural programs) and attributes describing the structure of the information in a dictionary.

A USER-FILE DICTIONARY file contains attributes and attribute synonyms describing the structure of the data in the user-file. These attributes define the data field names, describe how it is to be accessed and displayed and any functions or interrelations with other files or data records.

The USER-FILE DATA file contains the actual data, stored in a variable field length format. In addition to the normal record/field data structure, a field can contain multiple values – and a value can consist of multiple sub-values.

About REALITY.

The examples in this brochure talk about inventory control. But REALITY can do a lot more. It can also give you control of Order Entry and Invoicing, Sales Analysis, Accounts Receivable and Payable, Bills of Materials, Payroll, General Ledger and a long list of specialized applications.

REALITY puts control of your entire organization at your fingertips.

About Microdata.

Microdata occupies some 280,000 square feet of manufacturing, office and warehousing space at plants in California, Barbados, Puerto Rico and the United Kingdom.

The company designs, manufactures and markets minicomputers, small mainframe computer systems and peripheral equipment for the small business computer market.

Microdata's field service organization includes service centers in key cities throughout the United States, Canada, and the United Kingdom. They are staffed by specially trained Microdata technicians who provide maintenance and service for Microdata products both under warrantee and under separate post-warrantee maintenance agreements.

About you.

You need to gain control of your business. You don't want to buy more computer than you need, but you don't want to buy one you'll outgrow in a year or two, either. And you don't want to hire an elite corps of data processing people to play interpreter between you and your company's data.

A REALITY computer system that gives you exactly what you need right now and keeps on growing with you as your business grows. A computer system that will give you personal control over your own business. In ENGLISH.

Call now to arrange for a free demonstration.

Microdata REALITY®

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EXTRA

Microdata News

EXTRA

SMALL BUSINESS COMPUTER SURVEY RESULTS.

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REALITY®=5
COMPETITION=0

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404/266-8900

USERS RATE SMALL BUSINESS COMPUTER SYSTEMS

MICRODATA REALITY WINS!
COMPETITION LOSES!

INSIDE STORIES:

WHAT MAKES A WINNER?

PERFORMANCE VS. NON-PERFORMANCE.

UPTIME VS. DOWNTIME.

EASY-TO-USE VS. HARD-TO-USE.

SUPPORT VS. NON-SUPPORT.

SERVICE VS. SERVICE.

BA9665 PRINTED IN USA 11-79

EXCLUSIVE

Users rate small business computer systems

Microdata Reality® wins, Competition loses!

A recent Management Information Corporation survey asked users to rate their data processing systems.

To assess how well small business systems are meeting users' needs, MIC polled 568 companies that use 689 small business CPU's.

Each respondent was asked to rate the vendors and their products on performance (whether stated equipment specifications have been realized), reliability (uptime vs. downtime), ease of use (amount of time necessary to train new personnel), service (maintenance) and vendor support (such as advance training and program assistance).

Taking the average of all five key user criteria Microdata's REALITY® beat the competition hands down.

ONE:
PERFORMANCE VS. NON-PERFORMANCE.

Does REALITY perform as well as spec sheets promise? "Yes," is the answer. Twenty-seven users operating some 55 REALITY units, in a variety of business situations and applications say so.

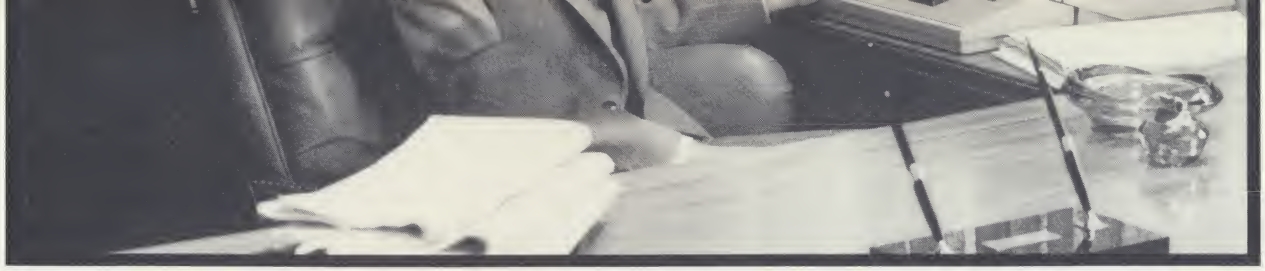
REALITY performs as planned. There is no lengthy warm-up period waiting to bring the system up-to-speed. There are no "surprise" extra expenses to bring the system up to expectation.

TWO:
UPTIME VS. DOWNTIME.

Our business — to keep your business going. How good is REALITY at keeping your data on-time, your information current? REALITY users, in real-life operations, say "excellent". Again, REALITY scored perfectly on one of the key reasons for selecting data processing systems. Microdata engineering, design and service keep data and information up-to-the-minute — cost problems and service down.

THREE:
EASY-TO-USE VS. HARD-TO-USE.

Survey users rated REALITY highest on ease-of-use. The fact is, REALITY uses the same language you use. ENGLISH™. You can use REALITY if you can read this sentence. Because instead of odd symbols,



The Reality System: what makes it a winner?

Part of REALITY'S winning formula is its award-winning operating system.

REALITY'S generalized data base management software provides multiple users with the capability to instantly update and/or retrieve information stored in on-line data files.

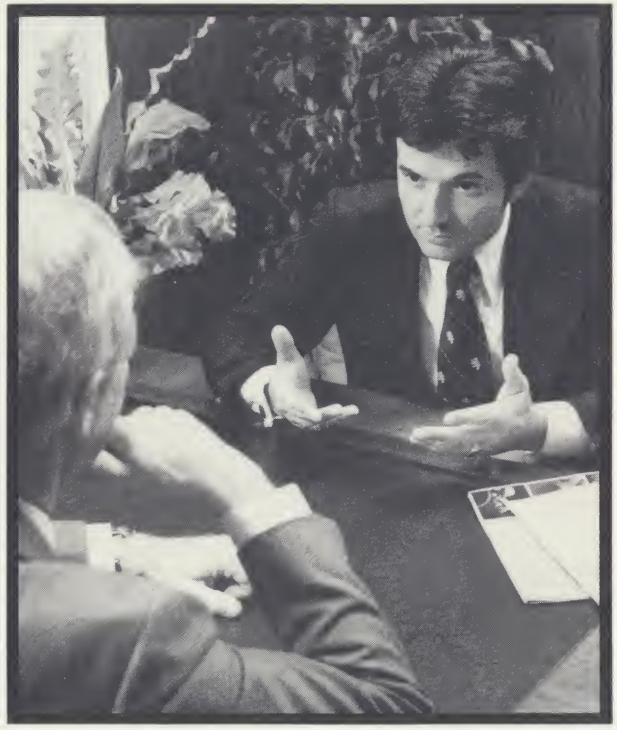
Microprogrammed firmware containing the virtual memory manager, multiuser operating system, and input/output processors provide unrivaled performance and reliability when compared to software driven systems.

All REALITY systems from the basic Series 2000 through the new powerful Series 8000 operate with Microdata's easy-to-use ENGLISH® retrieval language, as well as the more advanced DATA/BASIC™ and PROC languages. Also included is SCREENPRO™, a screen formatter/input utility and RUNOFF™ word processing.

REALITY offers unmatched growth advantages because it is designed to accommodate the growing needs of your business. Software investments are fully protected as REALITY system capabilities are upgraded.

PUT A WINNER ON YOUR TEAM.

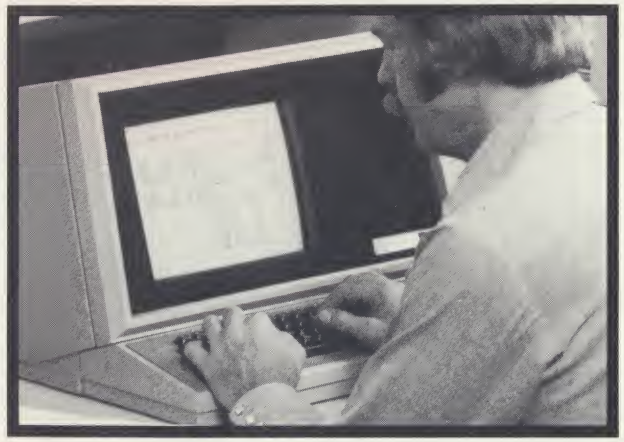
REALITY is the user-proven way to get control of your business. REALITY keeps your information accurate, on-time and up-to-the-minute. That's the kind of data that keeps you one, maybe two steps ahead of the competition. In business, the name of the game is winning and REALITY is a proven winner!



funny signs and random numbers, REALITY uses Microdata's award-winning ENGLISH retrieval language. The same language you speak everyday.

FOUR: SUPPORT VS. NON-SUPPORT.

Advance training and program assistance can make the difference between a winner and a loser. Microdata, one of the foremost designers and builders of minicomputers, knows how important system support is. REALITY supplies the kind of support that anticipates problems before they happen. And that happens to be one more reason REALITY ranks number one.



FIVE: SERVICE VS. SERVICE.

Our business is to keep you in business. Day after day. Year after year. Microdata maintains an extensive network of fully-equipped service centers in over 50 key cities nationwide. Our Microdata trained Customer Engineers are on-call 24-hours-a-day, seven-days-a-week. That's your insurance that REALITY is at your service, instead of in-for-service. And that's why users rated REALITY better than just 'good' on service.

"I'M READY TO PUT A WINNER ON MY TEAM!"

Show me how I can improve the management of my company with the computer system that rates number one. Please contact me immediately for a free hands-on demonstration of REALITY.

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TYPE OF BUSINESS_____

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